

PROCESS FOR INCREASING THE EFFICIENCY OF A COMPUTER
IN FINITE ELEMENT SIMULATIONS AND A COMPUTER FOR
PERFORMING THAT PROCESS

Abstract

5 The invention relates to a process for increasing the efficiency of a computer
system in finite element simulations by efficient automatic construction of suitable
basis functions for computing approximate solutions and one such computer
system. In the process as claimed in the invention, a grid covering the simulation
region is generated. B-splines defined thereon with supports, which intersect the
10 simulation region, are classified into inner and outer B-splines (5). Then, coupling
coefficients for forming linear combinations of inner and outer B-splines are
determined (6), and the parameters which determine the resulting basis functions,
are stored and output.

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